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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,480	06/01/2001	Kouki Fukui	2001_0681A	1037

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EXAMINER

AUGHENBAUGH, WALTER

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 09/12/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/870,480

Applicant(s)

FUKUI, KOUKI

Examiner

Walter B Aughenbaugh

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on \_\_\_\_.  
2a) This action is FINAL.                            2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_ is/are allowed.  
6) Claim(s) 1-14 is/are rejected.  
7) Claim(s) \_\_\_\_ is/are objected to.  
8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.  
12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.  
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.  
15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1) Notice of References Cited (PTO-892)                            4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                    5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_                    6) Other: \_\_\_\_

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because the language problems addressed in the 35 USC § 112 rejections below need to be addressed. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The disclosure is objected to because of the following informalities: "folded back 6" on fourth to last line on page 4 should read "folded-back portions 6" as written on page 5, line 1.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3-5, and 7-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 1, 3 and 5, the following terms are indefinite: "belt-like" (lines 1 and 6), "such as" (line 2), "or some other" (line 3), "sheet type" (line 4), "spirally wound" (line 5), "in such a manner". Each of the aforementioned terms makes it impossible to determine the metes and bounds of the claims, and/or the structure of the duct. In regard to the indefiniteness of the claims in regard to the structure of the duct, structure of the duct needs to be recited. The structure intended to be recited by "belt-like", "sheet type" and "spirally wound" must be clarified. In addition, the structure recited by "preceeding end portion" and "following end portion" in lines 5 and 6 of claims 1, 3 and 5 is unclear. The phrase "bonded together with a bonding agent in such a manner that the noncombustibility of a final product is not lost" of claim 1 is vague and indefinite.

Regarding claims 1, 3, 5 and 8-14, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

The term "firmly" in claims 3 and 5 is a relative term which renders the claim indefinite. The term "firmly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In regard to claims 4 and 7, the structural relationship between the flange and the "preceeding end portion" and "following end portion" is unclear. The phrase "that projecting from the following end portion thereof are wound in folded-back portions at edge sections of the noncombustible joint member" is indefinite. Furthermore, the structure of the "edge sections" needs to be clarified.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-6, 8-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Parrott et al.

Parrott et al. teach a duct 1 made of panels 5 of resin-bonded mineral wool sheet 7 adhesively bonded to inner and outer galvanized steel sheets 9 (page 6, first four lines of last paragraph, and Figures 1-4). The mineral wool sheet material is a fire-resisting material (top of page 2), and rock wool is a mineral material (first full paragraph, page 3). Neighboring panels 5 are connected via jointing strip 17 which comprises a mineral wool core with steel cladding 9 (paragraph on page 8-9 and Figure 5); the mineral wool core of jointing strip 17 is adhesively bonded to the steel cladding 9 as mineral wool sheet 7 is adhesively bonded to inner and outer galvanized steel sheets 9 as taught in the first four lines of the last paragraph of page 6.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 4, 7, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parrott et al. in view of Rechsteiner et al.

Parrott et al. teach the duct as discussed above. Parrott et al. also teach corner section 11, a steel sheet bent back on itself through 180° to form a reverse limb 33 which in turn has a portion 35 bent through 90° (first paragraph, page 8 and Figure 4). The bent steel sheet (corner section 11) thus forms channels 31 and 39 which each receive the edge region of a panel 5 (first and second paragraphs, page 8 and Figure 4). Parrott et al. fail to teach that the corner section 11 is caulked to the edge region of panel 5. However, Rechsteiner et al. disclose a metal to metal structural joint between panels (col. 6, lines 20-25). For example, see projection 20, leg 24 and recess 26 in Figure 2 (col. 6, lines 1-26). Rechsteiner et al. disclose that caulking compound 40 is applied between projection 20, leg 24 and recess 26 in order to eliminate vapor pressure feedthrough and to create a moisture seal at each joint (col. 6, lines 50-55). Therefore, one of ordinary skill in the art would have recognized to apply caulking between corner section 11 and the steel sheets 9 of the panels 5 of Parrott et al. in order to eliminate vapor pressure feedthrough and to create a moisture seal at each joint as taught by Rechsteiner et al.

It would have been obvious to have applied caulking between corner section 11 and the steel sheets 9 of the panels 5 of Parrott et al. in order to eliminate vapor pressure feedthrough and to create a moisture seal at each joint as taught by Rechsteiner et al.

***Conclusion***

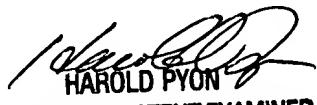
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 5,848,509 to Knapp et al. and U.S. 6,042,911 to Berdan, II.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B Augenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba  
09/09/02

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

  
8/9/02